

**WATERBURY SPEED GEAR DEMONSTRATOR, DEVICE 29T2****ORIGINATING AGENCY:**

NAVTRASYSSEN

SECURITY CLASSIFICATION:

Device 29T2 is unclassified.

FUNCTIONAL DESCRIPTION:

The Waterbury Speed Gear Demonstrator, Device 29T2 is designed to explain to military personnel the theory of operation of this mechanism. The mockup is used by instructors for group training, and by individuals for self-instruction.

The mockup of the pumping section of the Waterbury Speed Gear is 17" L x 13" W x 13" H. The device is manually operated by a crank attached to the main shaft. A screw and crank mechanism fixed to the tilting box enables the instructor to vary the angle of pump displacement. The cylinder barrels are partially cut away so that the internal operation of the pistons are visible.

The Waterbury Speed Gear is the transmitter unit "A-end" of a hydraulic servosystem. The hydraulic motor "B-end" is similar to the A-end but lacks an adjustable socket ring bearing. The B-end unit always follows the A-end unit in speed and direction.

Device 29T2 is a mockup of the A-end of the dual units. The A-end is a multi-cylinder pump having seven (7) parallel axially disposed cylinders, pistons and connecting rods. A socket ring bearing assembly is mounted in a tilting box. The socket ring is free to turn the tilting box and may be positioned at different angles to the drive shaft. Tilting the socket ring from perpendicular gives the pistons reciprocation and consequent suction and pump displacement of liquid through the cylinder head parts.

REFERENCE PUBLICATIONS:

NAVEXOS P-1075: Instructor's Guide for Waterbury Speed Gear Demonstrator, Device 29T2.

EQUIPMENT SUPPLIED:

One (1) Waterbury Speed Gear Demonstrator, Device 29T2.

CONTRACT IDENTIFICATION:

Naval Training Systems Center, Orlando, FL

LOCAL STOCK NUMBER:

6910-LL-C00-7119